

Preparing British Military Nurses to Deliver Nursing Care on Deployment. An Afghanistan Study

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ABSTRACT

Background: The British Armed forces aim to provide the best possible nursing care to Service-personnel and others that they may treat. This study forms part of the first nursing qualitative research study undertaken whilst on deployment in Afghanistan, and assesses the effectiveness of the educational preparation and clinical placements for military nurses in preparing them for their operational role.

Aim: The overall study aim is to advance knowledge within Defence Nursing through an understanding of the predisposing factors that affect the delivery of nursing care during an operational deployment. This paper provides an analysis of the pre-deployment educational preparation and clinical placements.

Theory & Methods: A Constructivist Grounded Theory was utilised with data collected through semi-structured interviews with 18 nurses based in Camp Bastion Hospital, Afghanistan during 2013.

Results: Initial coding indicated 21 categories that influenced the delivery of nursing care. Analysis of these elements led to the identification of four major clusters: Military Nursing Care; Military Nurse Education; Unique Hospital Environment and Clinical Placements.

Discussion: Educational preparation consists of completing deployable operational nursing competencies, specialist training and individual tailored courses. This strategy was viewed as proving the appropriate academic requirement. However, training would be enhanced by introducing a formalised military preceptorship programme focussing on fundamental nursing skills. With individual short courses there may be insufficient time to consolidate training. Military nurses are applying for specialist training after 18 months, which was viewed as too soon. Paediatrics was a particular concern, and it was emphasised that educational courses must be combined with a standardised clinical placement policy.

Clinical preparation can be problematic as nurses are not routinely exposed to War Zone levels of trauma in the UK. Clinical placements need to be standardised and harmonised, and located in areas where nurses cared for patients with similar injury patterns as those witnessed on deployment. Current NHS Trust placements have military nurses working committed shifts which was seen as problematic, reducing the opportunities for nurses to be employed in suitable clinical environment and diminishing the opportunity for collective military training. Better use should be made of clinical rotation programmes, including high dependency units, elective surgery, medical assessment units, paediatrics, and outreach teams such as burns and plastic surgery and pain management. Practice Educators should be utilised to provide education, mentorship and practice development in the operational arena. The paper considers post Afghanistan future options and the benefits of overseas placements.

INTRODUCTION

British Armed Forces serve in Afghanistan with the International Security and Assistance Force (ISAF), and in particular with American colleagues. Soldiers (in this paper the general term for Royal Navy, Army and RAF personnel) have to constantly face advancements in military technology, including witnessing horrendous forms of death to friends, colleagues and the local population. In Afghanistan since 2001, there have been 447 British Armed forces deaths as a result of hostile action, 610 seriously or very seriously injured personnel and 7,053 aero medical evacuations (MOD, 2013).

The British Armed Forces aspire to provide a capable workforce, able to undertake their military duties, wherever they may serve. It is therefore essential that soldiers are provided with excellent nursing care. Collectively, defence nurses form the critical mass of registered healthcare clinicians and are the largest single speciality within the Defence Medical Services (DMS) (Development, Concepts and Doctrine Centre (DCDC), 2013). Nurses are utilised from point of wounding and then throughout the rehabilitative pathway. In Afghanistan, the major hub for medical activity is Camp Bastion Hospital, which contains multi-national British, American and Danish clinical staff under British command. This hospital provides care to ISAF, Afghanistan National Security Forces (ANSF) and local nationals of all ages including captured persons (CPers) (Simpson, 2013).

There has been few qualitative research studies assessing the effectiveness of the military nurses' operational role (Kiernan et al, 2013). This paper presents the first qualitative Defence nursing research undertaken on deployment; in this instance at Camp Bastion Hospital, Afghanistan in 2013. The mental health nursing care that is provided is covered in a separate paper (Finnegan et al, 2014).

Operational Nursing Care

All nurses, whether military or civilian, and whatever discipline or place of employment, share common foundations. Trust, care, and compassion are intrinsic to all duties, and nurses must have the theoretical competencies to be safely employed within their designated scope of practice, underpinned by academic training, ethical commitment, social accountability and registration is maintained. The primary differences between military and civilian nurses' are the requirement to be an autonomous practitioner, working in hostile, unpredictable and challenging environments where flexibility is a necessity. In this paper, reference to military nurses is personnel who are serving as a Regular or Reservist in the British Armed Forces. References to Defence Nurses include MOD civilian employed colleagues and the wider nursing community that supports Armed Forces personnel.

Common Injuries

The patient population are predominately young men, serving in the Army. Defence nurses routinely provide care to patients with minor injuries and medical problems such as gastroenteritis. The signature serious injuries of Afghanistan conflict is poly-trauma injuries, with orthopaedic problems including amputations, associated injuries such as burns (Jansen et al, 2012). These serious injury patterns witnessed on operations are dynamic; changing as either the means of delivery such as Improvised Explosive Devices (IEDs) improve or personal protection gets better. The increasing effectiveness of medical and surgical care has resulted in more casualties surviving that previously would have died. From 2006-09 25% of seriously injured soldiers were categorised as "unexpected survivors", in comparison to the British National Health Service (NHS) hospitals rate of approximately 6% (Hodgetts, 2012). There is an associated extra demands with nursing severe poly trauma injuries. This has resulted in certain aspects of operational healthcare being classed as exemplary, in particular: care provided to casualties; training of staff; design of field hospitals, and rehabilitation for injured personnel. (CQC, 2012). The result of this unique patient population is at that the Hospital Ward is matchless in the type of casualties requiring care. This has resulted in defence nurses requiring a wide range of skills including wound care and pain management.

Paediatrics

Approximately 10% of all Intensive Care Unit (ICU) admissions are paediatric casualties. (Inwald et al, 2013). The mechanism of injury is similar to adult admissions with penetrating head trauma, severe burns or multiple injuries, caused by IEDs and gunshot wounds. In Inwald et al's study (2013), the level of care required is reflected in that 73% were mechanically ventilated, 14% required inotropic support and 11% died. Of the 16 patients with predicted mortality >50% by Trauma Injury Severity Score, seven survived. No paediatrician is deployed at Bastion hospital. Specialist advice is received from the Birmingham Children's Hospital, United Kingdom (UK) paediatric intensive care retrieval service (Arul et al, 2012). Coalition soldiers admitted to Bastion are usually evacuated within 24 hours to the Queen Elizabeth Hospital in Birmingham, UK. There is no equivalent rearward evacuation chain for locals, resulting in longer admissions.

Educational Development

There is a paucity of robust information and research about health professional education (Frenk et al, 2010). In the military, workforce planning and manning requisite, including post registration education and then specialist cadre requirement, are defined to provide sufficient numbers of nurses to meet the estimated operational necessity. That is the number of nurses from different specialities that are essential to provide the correct level of support to British Armed Forces troops; allies and potentially the local population.

Educational Delivery with the British Armed Forces is via a Department of Healthcare Education (DHE) that provides support to military pre-registration nurse training and delivers a post registration BSc (Hons) in Defence Healthcare Studies. This is in line with UK Nursing and Midwifery Council guidelines (NMC, 2010). This supports the DMS nursing educational programme which is four fold.

The British Armed forces recruit student nurses who complete either adult or mental health nurse training; delivered at Birmingham City University in conjunction with the DHE. In a study by Bell (2013), military students were classified as high achievers, and identified themes subsumed under the themes of image, ethos, environment, discipline, support, welfare and a civilian versus military way of thinking.

Once qualified, military nurses undertake a period of NHS preceptorship and work towards completion of a clinical proficiency requirement defined within the Defence Operational Nursing Competency (DONC) document (MOD, 2010). The DONC is in the format of a workplace learning booklet, graded at Levels 2, 3 and 4. The first edition based on Bloom's (1956) Taxonomy, whilst the DONC re-write, which will be published in April 2014, is based on Benner's (1984) Novice to Expert continuum. The framework provides an architecture for professional advancement, proof of competence and credentialing and selection for specialist advance practice (See Table 1).

Level	Competency	Deployment criteria	Educational Requirement
2	Basic	Nurses must successfully complete.	RN. Clinically and militarily inexperienced staff. Placements are primarily completed in medical and surgical nursing.
2	Specialist	Specialist nurses must successfully complete within their scope of practice.	60 credits at Level 6 (BSc Equivalent).
4	Advanced	Advanced, autonomous practitioners must successfully complete.	Masters Level or Higher Degree.
Defence Operational Nursing Competency			

Table 1.

There are financial awards linked to successful completion of the respective levels. This is a similar appraisal structure to the Knowledge Skills Framework (DoH, 2004). The expectation is that nurses will achieve the entry Level grade 2 within one year of qualification or recruitment and ensures a

common benchmark to be achieved before nurses are deemed proficient to deploy. DONC specialist competencies, skill sets and knowledge are graded at level 3 and 4, and are aligned to clinical experience and post graduate training. Specialist training and Masters / Higher level Degrees are provided by civilian Universities and supported by the DHE. Finally, the role for every deployable nurse is assessed and educational requirements indicated. Once a nurse has been identified for mobilisation, then their personal profile is evaluated and bespoke courses such as Advanced Life Support (ALS) is either provided internally or external suppliers are sourced.

Educational evaluation is draw together in a concentrated 2-week pre-deployment programme. This Mission Specific Validation (MSV) Hospital Exercise (HOSPEX) is completed in a replica Camp Bastion Hospital based within the Army Medical Services Training Centre in York, UK. Staff work through scenarios in real time, and involves macrosimulation. Whilst no empirical studies have been undertaken to ascertain if this military educational model is effective, it has been cited as being an innovative and invaluable resource (Hayes & Ryan, 2011). Anecdotally it does appear to offer a level of consistency to ensure personnel are assessed as fit for task and able to deploy.

Of note, Service needs can place constraints on the way nurses attempt to maintain basic skills competence and access Continuing Professional Development (CPD), because the workforce is geographically spread, may be deployed and undertaking a number of roles in order to develop militarily (Clifford, 2007).

Clinical Placements

Military nurses employed in Secondary Healthcare (SHC) prepare for their operational role through clinical placements in civilian hospitals; being appointed to the Royal Centre for Defence Medicine (RCDM) within the Queen Elizabeth hospital Birmingham, or to Ministry of Defence Hospital Units (MDHUs) based within Frimley Park, Northallerton / James Cook, Middlesbrough, Derriford and Peterborough NHS Hospital Trusts. Nurses are routinely appointed for a period of 2 to 3 years. This can be complemented with bespoke placements, such as the Birmingham Children's Hospital. Other nurses employed within non-clinical environments are directed to obtain an appropriate clinical placement for a period of 10 days in every 6 months (MOD, 2008) together with 450 hours of registered practice and 35 hours of CPD learning activity in the previous three years (NMC, 2011). No previous research has been undertaken to determine if this model is effective.

AIM

The overall study aim is to advance knowledge within Defence Nursing through an understanding of the predisposing factors that affect the delivery of nursing care during an operational deployment. This includes analysis of multi-professional and multi-national boundaries, and the challenges of providing nursing care for both military and local nationals. This paper focuses on the impact of the educational preparation and clinical placements.

THEORY & METHOD

The research sample was drawn from the 59 UK nurses based at Camp Bastion Hospital in June and July 2013.

A Constructivist Grounded Theory was utilised (Charmaz, 2006) with semi-structured interviews applied to collect information from 18 military nurses. The first author contacted the commanding officer of Bastion Hospital before deployment to outline the study, gain approval and support. The study aim and requirement was transmitted to all UK nurses based in Bastion Hospital prior to the first author's deployment. The first author timed the visit so that all potential respondents had been in Camp Bastion for a 10 week period. Once in Afghanistan, the first author visited every hospital department, discussing the project with nurses and leaving reading detail. Each volunteer was given 48 hours to consider their decision. Interviews were digitally recorded and continued until saturation was achieved (Charmaz, 2006). The first author's experience in the Defence nursing provided familiarity with both the phenomena and the clinical and military nuances of language.

The first author designed the interview schedule, then conducted and transcribed the discussions. Information is being stored in accordance with the Data Protection Act (1998). Informed consent was obtained (Central Office for Research: Ethics Committee (2005)) and UK Ministry of Defence Research Ethical Committee (MODREC) approved the research.

RESULTS

Interviews lasted between 17 and 70 minutes with a mean of 50 minutes and a SD of 12. All respondents were registered nurses. 68% (N=12) had completed specialist training, 68% (N=12) had a Diploma of higher; 56% (N=10) had a BSc or higher, and 11% (N=2) had an MSc.

56% (N=10) of the respondents were male and 44% (N=8) were female. The mean age of respondents was 39 years, with a range of 29 to 50 years old. 72% (N=13) were Officers and 28% (N=5) were other rank (See Chart 1). 6% (N=1) was serving in the Royal Navy, 72% (N=13) in the Army and 22% (N=4) were in the Royal Air Force. 72% (N=13) were married, 17% (N=3) were single, 6% (N=1) separated and 6% (N=1) divorced. 68% (N=12) had children and 33% (N=6) were single.

The mean length of time as a qualified nurse was 14 years, with a medium of 11 years and SD of 7 years. The average number of years employed within the MOD was 11, with a SD of 5. 94% (n=17) had previously deployed on an operational tour, with 72% having completed 2 or more tours, 39% four or more tours, and 33% six or more tours. Range from 0 to 9 deployments. 84% (N=15) had previously completed a tour in Afghanistan and 79% (N=13) in Iraq. Analysis was performed using SPSS Version 21.

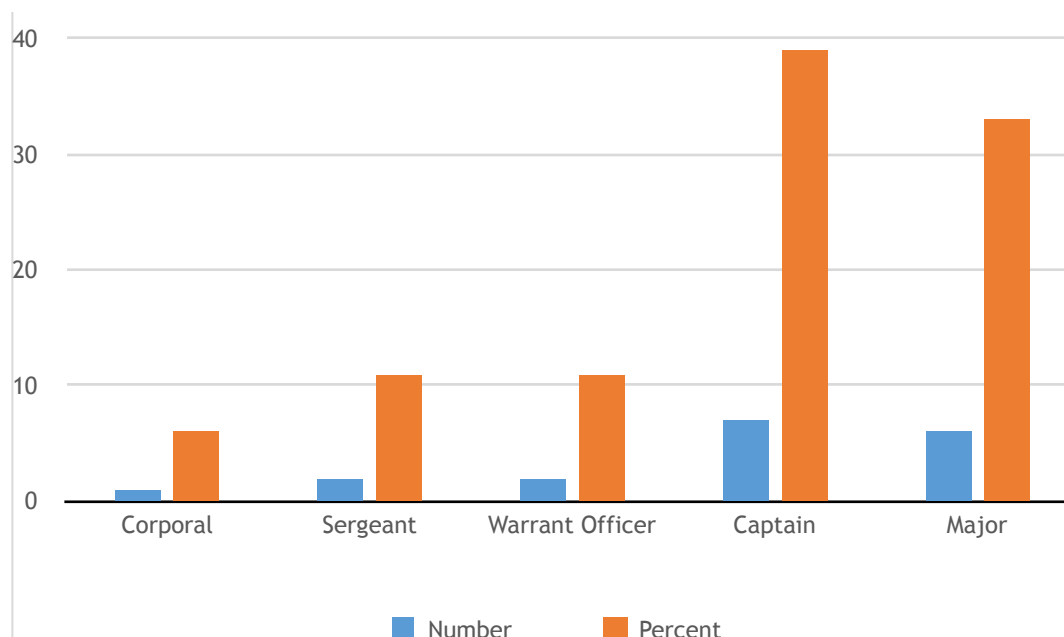


Chart 1. Respondents' Rank

Initial coding indicated 21 categories (see Figure 1). Analysis of these elements led to the identification of four major clusters: Military Nursing Care; Military Nurse Education; Unique Hospital Environment and Clinical Placements (see Figure 2). Presentation of the findings is intended to protect the anonymity of respondents who are referred to as AA, BB etc and no further information is disclosed. The discussion below is divided into 2 sections; educational preparation and

then clinical placements. The interviews were conducted by nurses employed in a range of disciplines and the results reflect these differences.

DISCUSSION

Educational Preparation

A significant majority of participants indicated that the defence nursing educational strategy provided military nurses with the appropriate academic requirement for deployment. During the long standing operations in Iraq and Afghanistan since 2001, the educational training coupled with the application of lessons learnt have resulted in a perceived high level of quality nursing care. Contributors reported that they could not identify any significant differences in qualified nurses regarding whether the military nurse were Diploma or Degree educated.

Newly Qualified Nurses

Participants thought that Defence nurses should have a formalised preceptorship programme, which should be in addition to civilian NHS Trust requirements. Newly qualified nurses should not be rushed onto deployments or specialist training.

“Newly qualified, I do think they need a substantial hospital piece into that role, and then consolidate their nurse training. It’s like a driving test, you can legally drive; it doesn’t mean you are a safe driver. ” (OO)

The military do provide early additional training including Transition to Military Practice and Intermediate Life Support (ILS). However, participants felt that early military preceptorship programmes should include a focus on traditional and fundamental nursing skills, aligned to directives for core values and principles associated with care and compassion (DoH, 2012a; DoH, 2012b). A dilemma is that technological advancements in the UK has resulted in nurses lacking the basic skills of previous generations; competencies that are required for operations. DD provided an example:

“We need to do patient assessment skills and appropriate courses. That is a training need that we don’t have. Whilst we do blood pressures, most don’t know how to use a stethoscope, most don’t know how to do a respiratory assessment, using percussion, and some of those skills in this austere environment are key. This needs to be a fundamental basic, and listening to bowel sounds, we don’t do it anymore.” (DD)

This can be extended to include the completion of nursing documentation and observations charts.

Defence Operational Nursing Competency (DONC)

Educational preparation and competency for deployment is intrinsic with the DONC process, and military nurses are not considered competent to deploy until they have achieved Level 2. The Participants felt the DONC provided some level of confidence that newly qualified nurses were fit for deployment, although more was required, and there was benefit in continuing to explore and learn from other competency models such as the Manchester Critical Care Pathway (NHS, 2013). In addition, red card reporting enables nursing personnel to report a skill they were required to deliver, that did not appear on the DONC competency framework.

However, DONC delivery was viewed as problematic, and the process is often rushed. Military nurses desire the associated financial remuneration that comes with accreditation. Assessment is affected by a number of variables leading to disparity in the appraisal process, due in part to the competency of the assessor. Scrutiny was viewed as poor, and there are integrity issues that are not upheld, and it needs to be more verifiable. Recommendations were voiced to resolving these issues with a training package for assessors.

“ I think the DONC in its conception is a sound piece; the problem is the delivery of the DONC. There is a standard that you expect people to be at, which perception differs from assessor to assessor, where realistically there has to be one standardised level of assessment. We don’t have the method of delivering the competency for it. We almost take it partly on merit and that people have already undertaken Trust related courses. I think, between MDHUs that varies because obviously PD (Practice Development) led and how the PD team feel they should be

delivering. That is where the guidance is missing, and this need for a training package. It has standards that need to be there, but not the how to get to that point.” (FF).

There was the question of how nurses employed in non-healthcare settings can access the correct assessors; especially personnel posted to Medical Regiments or Reservists, leaving the competencies to be potentially assessed in simulated conditions such as HOSPEX. There are specific Primary Healthcare requirements for DONC at Level 2, yet respondents felt the DONC was viewed as being targeted at SHC clinicians. There are anticipated further implications and limitations when DONC is applied to post Afghanistan contingency operations. Participants questioned the assessment of DONC within the NHS civilian settings, where defence nurses are primarily looking after civilian patients, and does not reflect the patient population faced on deployment. It was perceived that DONC could also be used more creatively to provide the correct skill mix within the clinical area; such as enhancing clinical skills in areas such as Burns and Paediatrics.

Ultimately the DONC was seen as an assurance mechanism. If there were shortfalls in the pre-registration educational programme, or the military nurse had not had the correct clinical exposure and placements, then the DONC can be viewed as a measure of assurance that the individual is ready to deploy. In addition, as the assessment process is not without flaws; then additional efforts should be taken to identify deficits through evaluations of personal CVs and profiles. This process must be completed early in the pre-deployment piece to leave time to rectify any shortfalls.

DONC also contains bespoke military requirements aligned to military proficiencies. Part of the rationale is that defence nurses have accelerated promotion which potential leaves a military knowledge shortfall which the DONC can be utilised to address. However, it is these military skill sets where nurses can struggle to demonstrate competence.

Specialist Training

A core of specialist trained nurses was seen as effective for obtaining the correct ward / departmental skill mix. However, participants’ perceived that there is a requirement for acquiring educational training in areas such as pain management, tissue viability / wound care (including burns and plastic surgery), nutrition needs and paediatrics. This could be intelligently managed by ensuring that nurses undertaking surgical speciality training complete, for example a pain management module.

Universities specialist training modules are understandably targeted at civilian healthcare employees; making it difficult to transfer the educational modules to reflect the military requirement. Additional problems occurred when speciality training was delayed due to operational tours, resulting in subsequent problems in completion. Therefore some respondents advocated full time courses.

Defining when Registered Nurses (RN) can apply for specialist training is an employee’s decision. There is no Nursing Midwifery Council or Royal College of Nursing guidelines, and the DMS have defined the period of 18 months post registration. The aim being to promote innovation and competence, and a qualified cadre, however respondents deemed too soon. There are financial motivators for nurses taking this option, but it was felt more general experience provided a better grounding.

“The only thing from an Army side is that they push their personnel quite quickly through. I want to do ITU, OK, you’re on your course next month. Then they are in sudden shock mode, they come to us, and we try to get them a quick start and we do send the message back that this is a stressful place and you are disadvantaged against those already in the role.” (NN)

The feedback was that nurses should not be allowed onto specialist training until at least 3 and 5 years post registration. It was also felt that a regulation stating a specific period of time was not the best measure; rather the individuals potential for an operational deployment, which is difficult to gauge in a civilian hospital.

Individualised Training Requirement and Consolidation of Training

The final piece in educational preparation is to identify individualised training required to produce the right skill mix within the operational arena. For example, ILS training is compulsory for all hospital based staff. These courses can be extremely relevant, and provide a resource knowledge to improve

clinical care. However, on occasions, participants felt some of the courses were not being particularly relevant. Another concern was that the requirement could result in undertaking a number of courses without the requisite time to consolidate the training, leading to “information overload” which resulted in some personal anxiety.

“You are given a whole host of qualifications to get through. For example, adult life support, paediatric life support. I do question the relevance of some of those. For me, it was a lot of information overload without being able to consolidate each section of learning before you are onto the next thing. Certainly things like APLS (Advanced Paediatric Life Support) are very stressful, you need a month lead up to that, and I did 3 courses of the nature within a 3-week period. As well as maintaining a daytime job. And trying to maintain a work life balance.” (EE).

Individuals reported that accessing pre-deployment courses is not always straight forward; with prerequisites to identify their own training and prioritise courses due to having to complete too many without enough time. This is in addition to preparing to deploy. This can be intensified when someone’s role changes near to the deployment date, for example being allocated a position in ITU and then changing to another role. It was felt that a better way to provide pre-deployment training was to pull all the courses together, and potentially provide in-house training, with the right people accessing the training they required.

A particular concern regarded paediatric courses. The DMS Paediatric Anaesthesia and Critical Care Special Interest Group (PACCSIG), provides clinical guidelines, advice and recommendations on equipment and training (Nordmann et al, 2011; Woods et al, 2012). Participants valued the opportunity to undertake paediatric short courses combined with pre-deployment paediatric training and simulation scenarios included in pre-deployment training at HOSPEX. However, it was emphasised that academic courses do not impart experience, and without appropriate clinical exposure then educational training was limited.

“We have invested in Paediatrics through the paediatric support operations course. But that is only a course, it only gives you the knowledge, and inquisitively having the hands on experience and confidence to deal with children, that’s a completely different kettle of fish. And you don’t want the first child you look after to be a very sick trauma patient.” (FF).

Another common reference was that nurses are required to undergo child protection training prior to deployment. However, Afghanistan does not have UK levels of child protection services and participants struggled to identify the relevance of training that could not influence local child protection issues.

Clinical Preparation

In certain disciplines such as Mental Health, it was felt that peacetime clinical preparation and placements was sufficient to prepare nurses for their operational role. However, for nurses completing clinical placements within SHC NHS Trusts, there were significant concerns, and clinical preparation was either inadequate or could be improved. Contributors felt that the issue of placements should be underpinned by a clear policy document detailing the requirement.

A Unique Clinical Environment

A major emerging theme is that Afghanistan presented many unique challenges stemming from patients presenting with poly trauma injury patterns and survivor rates; developments that have changed clinical practice. For example the universal re-introduction of Tourniquets to arrest bleeding, a military initiative now reflected in civilian pre-hospital practice settings (Brodie et al, 2007; Lee et al, 2007). This distinctive environment makes peacetime clinical preparation problematic as nurses are not routinely exposed to War Zone levels of trauma.

“I think it is difficult because the casualties we get here are not the sort you see in the UK. You don’t get 3 triple amps together etc. Our RTA (Road Traffic Accidents) are local nationals and they don’t wear seat belts, they don’t have proper cars. So we have different levels of types of

patients... You certainly get trauma in MDHUs but not trauma to the extent that you have amputations and gunshot wounds and casualties with half a body missing.” (QQ)

Clinical Placements and Level 1 Trauma Centres

In the first instance, participants felt that pre-registration NHS placements did not provide the correct clinical exposure, and military nursing students should be employed in areas that reflect where they will be deployed once qualified; with a similar young patient population.

From 2007 to 2011, RCDM witnessed significant admission levels of seriously injured military casualties evacuated from the high impact operations in Iraq and Afghanistan. Casualties routinely arrived within 48hrs to 72 hours of sustaining their injuries. Participants therefore perceived that RCDM was the location to get the right clinical experience, especially in Trauma and Orthopaedics (T&O), Operating Theatres and ICU. As one of the participants recounted:

“4 years ago the throughput from HERRICK back in Birmingham was horrific. As a theatre nurse with nearly a quarter of a century of experience, my breath was taken away. I could not even comprehend the level of injuries people were surviving and where do you even start preparing for that. Because the profile of RCDM and the number of military patients meant that there was a very strong military team there. I think that prepared us well.”(JJ).

However, as the military footprint in Afghanistan is reduced, the number of British casualties have markedly eased. When personnel do not have exposure to penetrating trauma or blast injuries, then it was regarded as negatively impacting on their ability to contribute on deployments. Others were clear that the MDHU model did not make them fit for task. Particularly bad placements were seen as caring for people who did not reflect the military patient.

“Then you have your trauma and orthopaedics long stay. Fractured neck of femurs, which is not good for us, and the age group that deals with is not our population.” (FF)

Therefore, it was universally acknowledged that clinical placements need to be standardised and harmonised. Level 1 trauma centres was identified as offering a greater scope of practice, as long as defence nurses cared for a young population with poly-trauma injuries that correlates with military casualties. However, NHS civilian colleagues have their own requirements, and routine exposure to multi trauma patients can fall to the local civilian staff and not military nurses, making clinical development sporadic.

Opportunities are further restricted with the specialisation of nursing in disciplines such as wound care and pain management, and civilians undertaking duties that military nurses must complete on tour, and it is essential to get military nurses adequately trained and onto these teams. But it is not just specialities where there are issues, and there were reports of a lack of clinical exposure such as T&O, general surgery, and medicine.

“My T&O is limited, general surgery is limited; my medicine is absolutely limited, literally not done any training in those areas.....Yet you know you are going to get trauma, you know you will get some medical stuff, some higher acute patients. If ITU are busy, then patients may move to the ward. So everyone needs to have a good understanding of those conditions.” (CC)

Due to appropriate clinical placements opportunities varying markedly between RCDM and MDHUs, local initiatives have explored alternative options or there were cases cited of individual nurses actively exploring alternatives and finding their own placements.

Some NHS Hospitals were viewed as particularly understanding and supportive, providing supernumerary clinical placements where defence nurses were delegated to care for military type casualties. This was particularly well defined when there is a local champion, such as a military consultant working in a specific area can improve the quality of the deployment:

“On for a day period, I was available for 12 hrs, perhaps working in minor injuries and then someone would come and get me. The team is really good there. Then given flexibility to move to resus (RESUSTATION) and there was no issue from anyone. I was supernumerary in the team.” (AA)

However, busy and demanding roles; heightened when a unit such as a Medical Regiment is deploying, makes time management to undertake a placement problematic.

Local Military Contracts and Committed Shifts

Within RCDM and MDHUs contract agreements require defence nurses to undertake committed clinical shifts as part of the ward / departmental team. It was believed that these agreements were introduced to support medical colleagues and did not fit the needs of defence nurses. Contractual obligation was considered to be divisive, reducing the opportunities for defence nurses to be employed in the most suitable clinical environment, and reducing the opportunity for collective military training.

If staffing numbers or skill mix are unexpectedly reduced by locals taking sick leave, then defence nurses may find themselves providing cover. This may be exacerbated if the relationship with the local civilian staff is poor or the defence nurse is used as the departmental lead, making placements even more difficult to negotiate. Committed shifts resulted in nurses not being utilised in areas where they get the best exposure to fulfil their military role:

“If I am on a committed shift, I’m trouble shooting in minor injuries, because I can make that flow through quicker. And you are a target chaser if you are on a committed shift. It’s not often our guys will get in rhesus on a committed shift, because they want to get their own guys in there, understandably. And they can use us more effectively elsewhere to take the pressure off a very busy department. And keep the managers off their back.” (OO)

Rotation Programmes

It was believed that clinical placements must mirror the operational requirement, and the best means to achieve this was through a harmonised and universal rotation policy. These programmes for newly qualified staff should last for 18 months, and then an appropriate pathway devised including the option for military development in Medical Regiments or equivalent. Practice Development Nurses (PDNs) should provide the professional leads for implementation of this policy, and it should not be left to ad hoc local procedures. Participant’s perceived that there had been a lack of drive to introduce appropriate changes that may have negative implications.

In particular for Generalist Nurses and Ward based staff, rotation programmes were seen as essential to ensure that there was a common clinical competency. Rotation should include high dependency units, elective surgery with high patient turnover, medical assessment units, paediatrics, and outreach teams such as burns and plastic surgery and pain management. Other areas were also required such as obstetrics and gynaecology.

“You get patients (On Deployments) with a much higher acuity than you might ordinarily see on a ward. So some high dependency nursing would be useful. Not necessarily ITU, but high dependency. Because it is quite scary when they come around from ITU with all the lines and everything. They quite literally, we had a guy the other day who literally had been excubated as he was wheeled out of ITU into the ward. That is scary for a lot of guys. HDU experience without a doubt” (DD).

This lack of a clear policy has resulted in certain initiatives being personality led and faltering as personnel change over:

“Previously in Birmingham we established a rotation programme for HDU nurses but that seems to have stopped. Withered on the vine so we need to look at that.” (QQ)

Participant’s stated that there is a requirement to undertake a service evaluation to confirm that the value of the clinical attachments.

Paediatrics

The DMS is fabricated to treat adult patients; yet the reality is that on deployments there is a requirement to care for paediatric casualties. This is reflected in the Paediatric guidelines available in the DMS Clinical Guidelines for Operations (MOD, 2012), along with a variety of UK Paediatric

Intensive Care Unit (PICU) clinical guidelines. Staff are highly motivated to provide the best possible care but many concerns were raised, in particular lack of clinical exposure.

Support for paediatrics has developed. Before deployment, short Paediatric educational courses are available, which participants valued. In Bastion Hospital, the Children's British National Formulary and a PICU drug calculator are available in the ICU and specific drug infusion charts for children have been developed. However, the practical issues of having to perform paediatric tasks or complete drug calculations is stressful. The wider implications is that children can suffer life threatening injuries, and for nurses unused to dealing with paediatrics, this can have emotional ramifications and cause significant anxiety:

"Adult and paediatric piece, there is a distinction. And here, we see children with gunshot wounds, stabbing and also amputations. You need to get instance stability, cause (sic) you have a really low threshold because their circulating volume is so much less and they could have bleed out so much quicker. The time frame from point of wounding to getting here could be 20 minutes. Whether or not the initial triage has been done, they get here and they are just so much more unstable." (KK)

In Bastion Hospital, there is no deployed paediatrician, but there were two ward based civilian paediatric nurses, and they can be utilised in other departments as required. Anxiety was reduced when specialist paediatric nurses were available. The main concern was that whilst there is a requirement for pre – tour NHS paediatric placements; there is no routine arrangement for enabling these opportunities. As whilst staff are keen to support children, they shared in common with civilian colleagues in adult healthcare services that they were deskilled. (Crowe & Tan, 2011).

"Personally, it would take away the anxiety that every child you have will pass away. There are some good stories at the end of it where the child thives and does better." (GG)

Certain NHS Trusts have paediatric wards and provide placements for defence nurses, but the majority do not, as paediatric casualties are directed to specialist PICU and Paediatric High Dependency Unit (PHDU) located in a regional centres (Paediatric Intensive Care Audit Network National Report 2009–2011. (2012)). There have been local initiatives to redress this balance. Since 2008, RCDM has placed ICU and Emergency Department (ED) nursing personnel at the Birmingham Children's hospital. Participants who had the opportunity to undertake these placements stated they were essential; producing confidence and reducing anxiety on tour. However, the requirement and designated placement areas have never been articulated or formalised. There is therefore an urgent requirement for a bespoke paediatric policy and direction regarding who requires paediatric placements, how long for, and in which areas. Participants believed there should be a defined quota of paediatric experienced nurses per department. There is also a need for standardised educational and placements requirements, which should be subjected to service evaluations to indicate their worth.

MSV, AMSTC & HOSPEX

Pre-deployment training is developmental, changing to the dynamic vicissitudes of the battlefield, and participants recognised that there have been significant advances in clinical preparation due to bespoke AMSTC initiatives. MSV provides an opportunity to monitor how well staff are prepared for operational employment, by testing them with a number of different simulated scenarios. HOSPEX was generally viewed as excellent and the final piece before deployment. However, specific failures were reported such as not covering all the potential problems such as obstetrics and gynaecology problems. It was noted that simulation has limitations, and does not fully prepare for real life situations. Another inadequacy was the constantly emerging injuries patterns in Afghanistan, and HOSPEX is only current to the pre-deployment day when it is held, and cannot fully prepare for the ensuing operational tasks.

"I just feel that realistic training is massively important. I don't think that MSV and MSA, because of the stresses that you are put under there, to achieve and get the ticks in the boxes, I don't think that it does address these issues. You are thrown, together, you are given all of these critical situations to deal with, and you are watching how you are behaving. People are putting you under pressure to take you out of your comfort zone, and you don't have time to address these things. I don't think MSA and MSV have got it right." (EE)

There is a belief that Reservist nurses are employed within a civilian setting that is preparing them for their operational role. But this may not be the case, and therefore some personnel do not have access to clinical duties in their routine employment. Finding placements was a difficult task, which is even more exacerbated for Reservists and Individual Augmentees (IAs) (personnel who deploy but are not on the establishment of the formed unit). IAs may not be integrated into the deploying unit until immediately pre-deployment at MSV.

Professional Development on Operations

Despite all the advances in educational preparation, clinical placements and HOSPEX, there is still a requirement to develop technical and nursing skills once deployed. The belief was that during periods where staff change over, the Relief in Place (RIP), that there is a reduction in the standard of nursing care provided. Then as the tour progresses the competencies and knowledge improves with multi-layered clinical experience, but this cycle continues with the following RIP. This clinical risk is mitigated as Doctors rotate at different periods, and there may be value in nurses also being staggered through deployments or all completing a 6 month tour. Another alternative is to accept that there are educational requirements, and to utilise Practice Educators to provide mentorship, supervision and training on deployment. In particular, this would prove useful for newly qualified nurses and those working in areas where they have limited clinical experience.

Return to Contingency and Overseas Placements

When the British Armed Forces withdraw from Afghanistan; troops will return to contingency operations. Participant's believed that there needs to be further assessment of the skill mix required for these emerging roles, for it was perceived that there is unlikely to be the level of clinical support witnessed in the stable and well defined base at Bastion hospital. Participants recognised that they would have to maintain their competencies in caring for complex blast injuries, and the UK health services may not provide adequate clinical exposure. Accessing appropriate overseas clinical placements in locations dealing with high levels of trauma has been advocated for Doctors by the UK Surgeon General (Farmer, 2013) and participants presented this as a viable option to gain experience. This model has a precedent:

“7 or 8 years ago there was training in South Africa to acclimatise staff to particularly poly trauma and ballistic trauma. Two people I know who did it found it very valuable. Again, people I know who have done surgical training in Denmark have found that very good.” (JJ)

The South Africa placements involved a multi-disciplinary team, and contributors' endorsed the benefits of basing a clinical team model in areas which deal with high levels of trauma. Working abroad in humanitarian aid with charities was viewed as another potential option. It was felt that the close working relationship with the USA could be extended by establishing opportunities for UK military nurses to be seconded to USA trauma centres.

Alternatively, there was a minority view for a significant refocusing, with nurses appointed to Field Units rather than RCDM or MDHUs. Nurses would then be placed to whichever hospital provides the best clinical and nursing opportunities. This has other benefits; as it was felt that nurses do not have the requisite military skill sets for deployment:

CONCLUSION

This paper presents findings from the first British Armed Forces qualitative research nursing study undertaken during an operational deployment. This offers an original and innovative insight into the role and challenges for educational preparation and clinical placements for military nurses.

The results from a British Armed Forces SHC perspective are reassuring in many areas. In particular the educational strategy was viewed as providing the correct balance to underpin an excellent standard of nursing care during deployments. However, several interesting views were raised that may lead to future improvements. Training would be enhanced by introducing a formalised military preceptorship programme which can be in addition to any local NHS Trust initiative. Such an option should focus on fundamental nursing skills. Whilst acknowledging that there is a rigorous process of assessment of those accessing specialist training; the respondents' views indicated that there is a requirement to

consider reviewing the current policy of allowing nurses to apply for specialist training after 18 months, which was viewed as too soon. The military competency assessment tool (DONC) was perceived as open to significant levels of disparity, partly due to the competency of the assessor. Scrutiny was viewed as poor, and there are integrity issues that are not upheld, and it needs to be verifiable. This could be resolved with a Train the Assessors Course. With individual short courses, for a number of reasons, there may also be insufficient time to consolidate training. Paediatrics was a particular concern, and it was emphasised that educational courses must be combined with a standardised clinical placement policy.

Nurses are not routinely exposed to War Zone levels of trauma in the UK. Therefore, clinical placements need to be standardised and harmonised, and located in areas where nurses cared for patients with similar injury patterns as that witnessed on deployment. These opportunities should extend to undertaking nurse-led autonomous practice, particularly in emergency medicine and PHC. The structure of having military nurses employed on committed shifts within NHS Trusts was seen as divisive, reducing the opportunities to work in the most suitable clinical environment and lessening the prospects for collective military training. Better use should be made of rotation programmes, including high dependency units, elective surgery, medical assessment units, paediatrics, and with outreach teams such as burns and plastic surgery and pain management. These programmes should promote a balanced clinical exposure, with potential to explore placements in pre-hospital care and PHC. The current military Practice Development Nurse position should be developed into a Practice Educator who should lead clinical placement rotation programmes. This role should be extended to provide education, mentorship, supervision and practice development in the operational arena. Post Afghanistan, consideration should be given regarding placing nurses overseas in areas of high trauma, with our Allies, Non-Governmental Organisations or charities.

A better understanding of the factors that affect the delivery of operational nursing care provides markers for improved force generation academic programmes and clinical placements. The model at Figure 2 provides practical direction to address the issues raised. If this is translated into DMS guidelines then it may lead to a nursing workforce with enhanced clinical skills, ensuring a high standard of nursing care and reducing the potential requirement for in theatre clinical development. Consequently, this may lead to better patient care and improve the quality of the tour for Defence nurses. If soldiers are provided with these appropriate interventions, within an environment that values leadership, then the operational capability of the British Armed forces can be enhanced.

LIMITATIONS

- The views refer to a particular point in time, and may not be reflective of nurses' views in different conditions or varying levels of clinical activity.
- The author's role as a DMS Senior Nursing Officer may have introduced bias.
- Findings reflect the views of deployed SHC nurses and may not replicate the opinions of nurses employed in other areas such as PHC.

Conflict of interest

Authors 1, 3 and 4 serve within the DMS. The views expressed are those of the respondents, and not necessarily the Ministry of Defence.

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Key Findings

1	A formal military preceptorship programme should be introduced, focussing on fundamental nursing skills.
2	The Defence Operational Nursing Competency appraisal is influenced by a number of variables leading to disparity in the evaluation process; due in part to the competency of the assessor. This could be resolved with a Train the Assessor course.
3	War Zone Afghanistan levels of trauma are not routine in the UK. Therefore clinical placements need to be standardised and harmonised, and located into areas where nurses cared for patients with similar injury patterns as that witnessed on deployment. This must include high dependency units, elective surgery with high patient turnover, medical assessment units, paediatrics, and outreach teams such as burns and plastic surgery and pain management.
4	The current military Practice Development Nurses role should be developed into a Practice Educator appointment. These nurses should leads rotation programmes with the position extended to provide education, mentorship, supervision and practice development in the operational arena.

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Personal Profiles

Colonel **Alan Finnegan** joined the NHS in 1978 and commissioned into the Royal Army Medical Corps in 1987. His clinical background is in Mental Health. He has deployed to Iraq, the Balkans, Northern Ireland, South Africa and Afghanistan. He has served as a Nurse Consultant in Military Mental Health and as the Defence Specialist Nursing Advisor in Mental Health. In 2007, he was appointed as the senior military nurse at the Royal Centre for Defence Medicine (Clinical) and is currently serving as the Defence Professor of Nursing and Head of the Academic Department of Military Nursing. He has been a reviewer for the Commission for Health Improvement, and is currently a member of the Royal College of Nursing (RCN) International Committee. He established the RCN Defence Forum, and then served as Chairman of the forum from 2004 until 2011. Well published in Defence Mental Health issues, he completed a PhD at Birmingham City University where he is the Visiting Professor of Army Nursing. Colonel Finnegan is also a Visiting Professor in Mental Health and Co-Director of the Centre for Veterans Wellbeing at the University of Chester. He is currently a Commissioner for the Lancet Commission on UK Nursing and Chairman of the British Army Nursing Research Professoriate.

Mrs **Sara Finnegan** joined the NHS in 1978 and is a Registered Nurse (Adult). During the past 34 years she has worked in the NHS, Defence Medical Services and the Private Sector. Her primary clinical experience is in Primary Healthcare nursing and she is currently a nursing Sister serving as an independent nurse practitioner in the Wirral Area of North-West England. Sara also completes telephone triaging and autonomous nursing duties at Chester's primary walk in centre. Her clinical interests are in travel medicine, sexual health and asthma management. Sara has co-authored several articles concerning army mental health issues.

Colonel **David Bates** ARRC QHN is Director Army Nursing Services and Assistant Director Healthcare Requirements and Assurance in the British Army Headquarters. He completed his Nurse Training in the Army and specialised as a Burns and Plastic Surgery Nurse. He commissioned into the Royal Army Medical Corps in 1988 and has served in Belize, Germany, Iraq, Croatia, Malawi, Bosnia, Oman and latterly Afghanistan. He is the Defence Specialist Advisor in nursing Chemical Biological Radiological and Nuclear (CBRN) casualties and has served as a CBRN advisor, was the 'intelligent customer' for the UK Medical Countermeasures applied research programme and was the Surgeon General's specialist advisor in CBRN medicine. He has a passion for preventative medicine and was a prime mover in developing the current Defence Medical Services Strategy which prioritises health promotion and protection, championing physical and psychological resilience across the Armed Forces. He has published and presented papers internationally including NATO. Current interests are improving multi-professional clinical leadership and identifying the sociological factors that contribute to musculoskeletal injury in the British Army and how to reduce risk of injury.

Major **Debra Ritsperis** is a Registered Nurse (Adult) and (Mental Health) and Nurse Tutor. She has worked clinically with military populations throughout the UK, Germany and Middle East and was responsible for setting up the Military Mental Health Service in Scotland. Educationally she has taught at Birmingham City and Portsmouth Universities. Currently she is the Nurse Education Advisor for the Army, ensuring Army nurses are recruited and clinically prepared to deploy on operations. Her academic interests are in research and audit of learning and skills. Debra is a RCN Defence Nursing Forum committee member.

Professor **Kathleen McCourt** practised as a RN(A) and RM, working in the UK, Germany and USA. Professor McCourt was employed in a number of senior roles in adult and paediatric intensive care whilst at the Freeman Hospital's Cardio-Thoracic intensive care unit. After completing teaching specialist and advanced practice at Masters degree level, Kath took on an international role at Northumbria University, which enabled her to work across the world on health and nursing projects. She was awarded a personal Professorial Chair in Nurse Leadership and Workforce Development and Education in August 2007. Professor McCourt was a RCN Council member for the Northern Region, 2005-13 and was appointed Chair of RCN Council (the governing body), 2011-2013. She chairs the RCN International Committee and in 2008 was made a Fellow of the Royal College of Nursing (FRCN). Professor McCourt was awarded the CBE in the Queen's Birthday Honours List in June 2012 and she became Executive Dean of the Faculty of Health & Life Sciences on 1st September 2012. The Faculty encompasses a wide range of professions and academics linked to science, health, psychology, education, social work and sport development. Responsible for a significant budget, the job of Executive Dean involves leading and managing a considerable number of staff over 2 sites. Professor McCourt is the Honorary Colonel for 335 Medical Evacuation Regiment and is also a committee member of the British Army Nursing Research Professoriate. Professor McCourt is a Visiting Chair at MAHSA University, Kuala Lumpur, Malaysia and has led on significant health education and wellbeing projects with Government Ministries in Malaysia,

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